in accordance with this section when a miner cannot be presumed to be totally disabled due to pneumoconiosis (or to have been totally disabled due to pneumoconiosis at the time of his death), under the provisions of §410.418. In addition, when a miner has (or had) a chronic respiratory or pulmonary impairment, a determination of whether or not such impairment is (or was) totally disabling is also made in accordance with this section for purposes of §410.414(b).

- (b) A determination of total disability may not be made for purposes of this part unless pneumoconiosis is (or is presumed to be) the impairment involved.
- (c) Whether or not the pneumoconiosis in a particular case renders (or rendered) a miner totally disabled, as defined in §410.412, is determined from all the facts of that case. Primary consideration is given to the medical severity of the individual's pneumoconiosis (see §410.424). Consideration is also given to such other factors as the individual's age, education, and work experience (see §410.426).

## § 410.424 Determining total disability: Medical criteria only.

- Medical considerations alone shall justify a finding that a miner is (or was) totally disabled where his impairment is one that meets (or met) the duration requirement §410.412(a)(2) or §410.412(b)(2), and is listed in the appendix to this subpart, or if his impairment is medically the equivalent of a listed impairment. However, medical considerations alone shall not justify a finding that an individual is (or was) totally disabled if other evidence rebuts such a finding, e.g., the individual is (or was) engaged in comparable and gainful work (see §410.412).
- (b) An individual's impairment shall be determined to be medically the equivalent of an impairment listed in the appendix to this subpart only if the medical findings with respect thereto are at least equivalent in severity and duration to the listed findings of the listed impairment. Any decision as to whether an individual's impairment is medically the equivalent of an impairment listed in the appendix to this sub-

part, shall be based on medically accepted clinical and laboratory diagnostic techniques, including a medical judgment furnished by one or more physicians designated by the Administration, relative to the question of medical equivalence.

## § 410.426 Determining total disability: Age, education, and work experience criteria.

Pneumoconiosis which stitutes neither an impairment listed in the appendix to this subpart (see §410.424), nor the medical equivalent thereof, shall nevertheless be found totally disabling if because of the severity of such impairment, the miner is (or was) not only unable to do his previous coal mine work, but also cannot (or could not), considering his age, his education, and work experience, engage in any other kind of comparable and gainful work (see §410.412(a)(1)) available to him in the immediate area of his residence. A miner shall be determined to be under a disability only if his pneumoconiosis is (or was) the primary reason for his inability to engage in such comparable and gainful work. Medical impairments other than pneumoconiosis may not be considered.

The following criteria recognize that an impairment in the transfer of oxygen from the lung alveoli to cellular level can exist in an individual even though his chest roentgenogram (X-ray) or ventilatory function tests are normal.

(b) Subject to the limitations in paragraph (a) of this section, pneumoconiosis shall be found disabling if it is established that the miner has (or had) a respiratory impairment because of pneumoconiosis demonstrated on the basis of a ventilatory study in which the maximum voluntary ventilation (MVV) or maximum breathing capacity (MBC), and 1-second forced expiratory volume (FEV<sub>1</sub>), are equal to or less than the values specified in the following table or by a medically equivalent test:

| Height (inches) | MVV<br>(MBC)<br>equal to or<br>less than<br>L./Min. | FEV <sub>1</sub><br>equal to or<br>less than I. |
|-----------------|---|---|
| 57 or less58    | 52<br>53  | 1.4<br>1.4                                      |

## §410.428

| Height (inches) | MVV<br>(MBC)<br>equal to or<br>less than<br>L./Min. | FEV <sub>1</sub> equal to or less than I. |
|-----------------|---|---|
| 59              | 54  | 1.4                                       |
| 60              | 55  | 1.5                                       |
| 61              | 56  | 1.5                                       |
| 62              | 57  | 1.5                                       |
| 63              | 58  | 1.5                                       |
| 64              | 59  | 1.6                                       |
| 65              | 60  | 1.6                                       |
| 66              | 61  | 1.6                                       |
| 67              | 62  | 1.7                                       |
| 68              | 63  | 1.7                                       |
| 69              | 64  | 1.8                                       |
| 70              | 65  | 1.8                                       |
| 71              | 66  | 1.8                                       |
| 72              | 67  | 1.9                                       |
| 73 or more      | 68  | 1.9                                       |
|                 |   | 1   |

- (c) Where the values specified in paragraph (b) of this section are not met, pneumoconiosis may nevertheless be found disabling if a physical performance test establishes a chronic respiratory or pulmonary impairment which is medically the equivalent of the values specified in the table in paragraph (b) of this section. Any decision with respect to such medical equivalence shall be based on medically accepted clinical and laboratory diagnostic techniques including a medical judgment furnished by one or more physicians designated by the Administration.
- (d) Where a ventilatory study and/or a physical performance test is medically contraindicated, or cannot be obtained, or where evidence obtained as a result of such tests does not establish that the miner is totally disabled, pneumoconiosis may nevertheless be found totally disabling if other relevant evidence (see §410.414(c)) establishes that the miner has (or had) a chronic respiratory or pulmonary impairment, the severity of which prevents (or prevented) him not only from doing his previous coal mine work, but also, considering his age, his education, and work experience, prevents (or prevented) him from engaging in comparable and gainful work.
- (e) When used in this section, the term *age* refers to chronological age and the extent to which it affects the miner's capacity to engage in comparable and gainful work.
- (f) When used in this section, the term *education* is used in the following sense: Education and training are fac-

tors in determining the employment capacity of a miner. Lack of formal schooling, however, is not necessarily proof that a miner is an uneducated person. The kinds of responsibilities with which he was charged when working may indicate ability to do more than unskilled work even though his formal education has been limited.

## § 410.428 X-ray, biopsy, and autopsy evidence of pneumoconiosis.

- (a) A finding of the existence of pneumoconiosis as defined in §410.110(o)(1) may be made under the provisions of §410.414(a) if:
- (1) A chest roentgenogram (X-ray) establishes the existence of pneumoconiosis classified as Category 1, 2, 3, A, B, or C according to:
- (i) The ILO-U/C International Classification of Radiographs of Pneumoconioses, 1971; or
- (ii) The International Classification of Radiographs of the Pneumoconioses of the International Labour Office, Extended Classification (1968); or
- (iii) The Classification of the Pneumoconioses of the Union Internationale Contra Cancer/Cincinnati (1968).

A chest roentgenogram (X-ray) classified as Category Z under the ILO Classification (1958) or Short Form (1968) will be reclassified as Category 0 or Category 1 and only the latter accepted as evidence of pneumoconiosis. A chest roentgenogram (X-ray) classified under any of the foregoing classifications as Category 0, including subcategories o/-, o/o, or o/1 under the UICC/Cincinnati (1968) Classification, is not accepted as evidence of pneumoconiosis; or

- (2) An autopsy shows the existence of pneumoconiosis, or
- (3) A biopsy (other than a needle biopsy) shows the existence of pneumoconiosis. Such biopsy would not be expected to be performed for the sole purpose of diagnosing pneumoconiosis. Where a biopsy is performed for other purposes, however (e.g., in connection with a lung resection), the report thereof will be considered in determining the existence of pneumoconiosis.